

INTERNATIONAL SEARCH REPORT

International Application No.
PCT, 03/28534

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B18/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 589 555 A (EVEREST MEDICAL CORP) 30 March 1994 (1994-03-30) column 10, line 10 - line 47; figure 1	1-10
A	EP 1 177 771 A (OLYMPUS OPTICAL CO) 6 February 2002 (2002-02-06) paragraphs '0174!-'0176!; figures 1,30	1,9
A	US 6 106 542 A (GRINSSTEIN VICTOR AVIGDOR ET AL) 22 August 2000 (2000-08-22) column 6, line 43 - line 53; figure 1	1,9
A	US 2002/091385 A1 (FURMANOV ALEXANDR Y ET AL) 11 July 2002 (2002-07-11) paragraphs '0168!, '0169!; figure 16	1,5,6,9
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- 'A' document defining the general state of the art which is not considered to be of particular relevance
- 'E' earlier document but published on or after the international filing date
- 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- 'O' document referring to an oral disclosure, use, exhibition or other means
- 'P' document published prior to the international filing date but later than the priority date claimed

- 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- 'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- 'Z' document member of the same patent family

Date of the actual completion of the international search

11 December 2003

Date of mailing of the international search report

19/12/2003

Name and mailing address of the ISA

European Patent Office, P.O. Box 6018 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl
Fax (+31-70) 340-3018

Authorized officer

Mayer-Martenson, E

INTERNATIONAL SEARCH REPORT

International Application No.

PCT. ... 03/28534

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 6 458 130 B1 (LUKIANOW WADE ET AL) 1 October 2002 (2002-10-01) abstract; figure 1</p>	1,9

INTERNATIONAL SEARCH REPORT

International Application No

PC1/99 03/28534

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0589555	A	30-03-1994	US 5258006 A	02-11-1993
			CA 2101306 A1	22-02-1994
			EP 0589555 A1	30-03-1994
			JP 2552424 B2	13-11-1996
			JP 6225886 A	16-08-1994
EP 1177771	A	06-02-2002	JP 8038485 A	13-02-1996
			JP 8038495 A	13-02-1996
			JP 8196540 A	06-08-1996
			EP 1177771 A1	06-02-2002
			AT 239425 T	15-05-2003
			DE 69530642 D1	12-06-2003
			EP 0694289 A1	31-01-1996
			US 5849022 A	15-12-1998
US 6106542	A	22-08-2000	NONE	
US 2002091385	A1	11-07-2002	AU 748440 B2	06-06-2002
			AU 2666999 A	30-08-1999
			CA 2321247 A1	19-08-1999
			EP 1054637 A1	29-11-2000
			JP 2002502660 T	29-01-2002
			WO 9940857 A1	19-08-1999
			US 2003114845 A1	19-06-2003
US 6458130	B1	01-10-2002	US 2003040745 A1	27-02-2003
			AU 756626 B2	16-01-2003
			AU 1225700 A	15-05-2000
			AU 757278 B2	13-02-2003
			AU 1225800 A	15-05-2000
			CA 2347014 A1	04-05-2000
			CA 2347633 A1	04-05-2000
			EP 1123058 A1	16-08-2001
			EP 1131010 A1	12-09-2001
			JP 2002528166 T	03-09-2002
			JP 2002528167 T	03-09-2002
			WO 0024330 A1	04-05-2000
			WO 0024331 A1	04-05-2000
			US 2003181910 A1	25-09-2003
			US 6511480 B1	28-01-2003
			US 6585735 B1	01-07-2003

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2007/021438

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61B 18/14 (2008.01) USPC - 606/51 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - A61B 18/14 (2008.01) USPC - 606/51 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Patbase, Google Scholar		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0188294 A1 (COUTURE et al) 12 December 2002 (12.12.2002) entire document	1-4, 9-13
Y		5-8, 14-17
Y	US 2001/0018591 A1 (BROCK et al) 30 August 2001 (30.08.2001) entire document	5-8, 14-17
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 25 January 2008		Date of mailing of the international search report 01 APR 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents. P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 April 2008 (17.04.2008)

PCT

(10) International Publication Number
WO 2008/045348 A3

(51) International Patent Classification:
A61B 18/14 (2006.01)

(21) International Application Number:
PCT/US2007/021438

(22) International Filing Date: 5 October 2007 (05.10.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/850,214 6 October 2006 (06.10.2006) US

(71) Applicant (for all designated States except US): **TYCO HEALTHCARE GROUP LP** [US/US]; 60 Middletown Avenue, North Haven, CT 06473 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TAYLOR, Eric, J.** [US/US]; 5 Blue Meadow Road, Middletown, CT 06457 (US). **HATHAWAY, Peter** [US/US]; 210 Clubhouse Road, Lebanon, CT 06249 (US).

(74) Agents: **WEBBER, Donald, L. et al.**; Covidien, 60 Middletown Avenue, North Haven, CT 06473 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

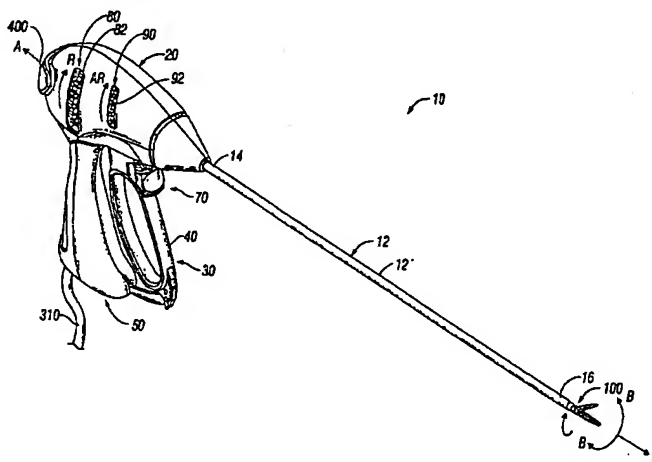
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
12 June 2008

(54) Title: **ENDOSCOPIC VESSEL SEALER AND DIVIDER HAVING A FLEXIBLE ARTICULATING SHAFT**



(57) Abstract: An electrosurgical instrument for treating tissue includes a housing having a flexible shaft extending therefrom having an axis A-A defined therethrough. The flexible shaft has first and second jaw members attached at a distal end thereof and each jaw member includes an electrically conductive tissue contacting surface adapted to connect to a source of electrosurgical energy. A drive assembly is disposed in the housing and has a first actuator operably coupled to a drive rod for reciprocation thereof and a second actuator operably coupled to the drive rod for rotation thereof. A knife is operably coupled to a distal end of the drive rod. Actuation of the first actuator moves the jaw members relative to one another for engaging tissue and actuation of the second actuator rotates the drive rod about the axis A-A to translate the knife to cut tissue disposed between the jaw members.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2007/021440

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 18/14 (2008.01)

USPC - 606/51

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - A61B 18/14 (2008.01)

USPC - 606/51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Patbase, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0188294 A1 (COUTURE et al) 12 December 2002 (12.12.2002) entire document	1, 8, 9
Y		2-7, 10-12
Y	US 2001/0018591 A1 (BROCK et al) 30 August 2001 (30.08.2001) entire document	2-4, 6, 7, 10-12.
Y	US 4,829,313 A (TAGGART) 09 May 1989 (09.05.1989) entire document	5

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

28 January 2008

Date of mailing of the international search report

08 APR 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 April 2008 (17.04.2008)

PCT

(10) International Publication Number
WO 2008/045350 A3

(51) International Patent Classification:
A61B 18/14 (2006.01)

(74) Agents: WADADLI, Aryn et al.; Covidien, 60 Middle-
town Avenue, North Haven, CT 06473 (US).

(21) International Application Number:
PCT/US2007/021440

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK,
LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW,
MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

(22) International Filing Date: 5 October 2007 (05.10.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/850,214 6 October 2006 (06.10.2006) US

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): TYCO
HEALTHCARE GROUP LP [US/US]; 60 Middletown
Avenue, North Haven, CT 06473 (US).

(72) Inventors; and

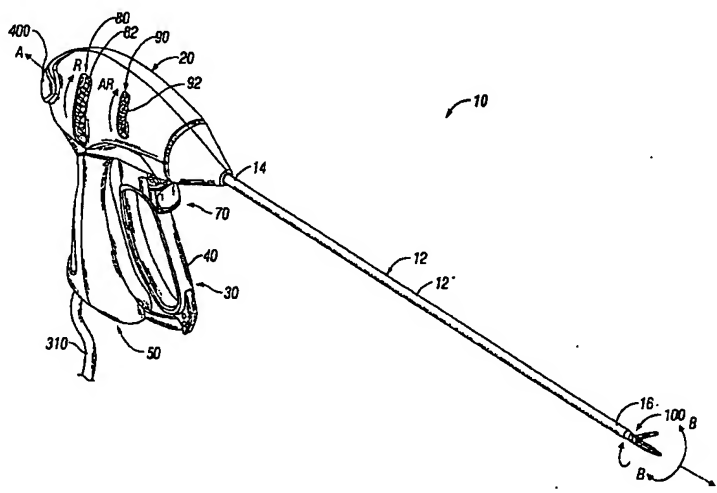
(75) Inventors/Applicants (*for US only*): MARCZYK,
Stanislaw [US/US]; 113 A River Bend Road, Stratford,
CT 06614 (US). FARASCIONI, David [US/US]; 30
Deepwood Drive, Bethel, CT 06801 (US). TAYLOR,
Eric, J. [US/US]; 5 Blue Meadow Road, Middletown,
CT 06457 (US). HATHAWAY, Peter [US/US]; 210
Clubhouse Road, Lebanon, CT 06249 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
17 July 2008

(54) Title: ENDOSCOPIC VESSEL SEALER AND DIVIDER HAVING A FLEXIBLE ARTICULATING SHAFT



(57) Abstract: An electrosurgical instrument for treating tissue includes a housing having a shaft extending therefrom having an axis A-A defined therethrough. The shaft is at least partially flexible and includes first and second jaw members attached at a distal end thereof. Each jaw member includes an electrically conductive tissue contacting surface adapted to connect to a source of electrosurgical energy such that the electrically conductive tissue contacting surfaces are capable of conducting electrosurgical energy through tissue held therebetween. A drive assembly is disposed in the housing and has a first actuator operably coupled to a drive rod for reciprocation thereof to move the jaw members from a first position in spaced relation to one another to a second position closer to one another for engaging tissue. A second actuator is disposed on the housing and is actuatable to articulate the shaft.